

CASE REVIEW FORM

Case Reviewer: Steven Hariri	Unit Chief: Rebecca Chou	Section Chief: Arthur Heath	Division Chief: AB	EO: Dennis Dickerson
Date: January 7, 2002		SLIC file no.: 744	Case reviewer: Steven Hariri Signature: <i>[Signature]</i>	
Site Name/Address: Jervis B. Webb 5030 Firestone Boulevard South Gate, CA 90280		Responsible parties: Jervis B. Webb	Address: 34375 West Twelve Mile Road Farmington Hills, MI 48331-5624	Phone no.: (248) 553-1000

I. CASE INFORMATION

Area of Concern	Contaminant Source	Chemicals of Concern	Source Status	Date of Action
Site	Rivet Manufacturing (leaking clarifier) and Conveyor Facility (USTs and Piping)	Chlorinated Solvents, Petroleum Hydrocarbons and Metals	UST Removal and Excavation, Soil Vapor Extraction and Reaming Out of Residual Contamination	10/18/96 and 3/16/00 to 12/14/01

II. SITE CHARACTERIZATION INFORMATION

GW Basin: Central Basin	Beneficial uses: MUN, IND, PROC, AGR	Depth to drinking water aquifer: Based on the closest groundwater monitoring well located 1,200 feet northwest, the first drinking water aquifer encountered is located at approximately 500 feet below ground surface.	
Distance to nearest municipal supply well: 1,200 feet		Distance between known shallow GW contamination and drinking water aquifer: 460 feet	
GW highest depth: 42 ft	GW lowest depth: 46 ft	Well screen interval: 40 - 70	Flow direction: Regional to the South
Soil types: Clay, silt and sand.	Max soil depth sampled: 53.5 ft	AB681 Notification: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no The responsible party is the owner.	Adjacent to school: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no

III. MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS IN SOIL

Contaminant	Soil (mg/Kg)		PRGs		Soil Screening Level (mg/Kg)	Contaminant	Soil (mg/Kg)		PRGs		Soil Screening Level (mg/Kg)
	Earliest (1996-1999)	Latest (2001)	Residential (mg/Kg)	Industrial (mg/Kg)			Earliest (1996-1999)	Latest (2001)	Residential (mg/Kg)	Industrial (mg/Kg)	
TCE	270	0.067	2.8	6.1	0.045 ^a	Beryllium	<0.54	0.57	150	2,200	4 ⁱ
PCE	140	0.039	5.7	19	0.045 ^b	Cadmium	8.3	0.6	9	810	5 ^m
1,1-DCA	0.052	<0.001	3.3	7.1	0.011 ^c	Chromium	7,300	74	210	450	50 ⁿ
1,1,1-TCA	0.300	<0.001	630	1,400	0.200 ^d	Chromium VI	0.88	0.24	0.2	64	50 ⁿ
TRPH	280	N/T	N/A	N/A	10,000 ^e	Cobalt	150	14	4,700	100,000	4,700 ^o
Benzene	0.005	<0.001	0.65	1.5	0.011 ^f	Copper	850	5.3	2,900	76,000	1,300 ^p
Toluene	0.012	<0.001	520	520	0.3 ^g	Lead	31,000	25	400	750	15 ^q
TPH (C5-C10)	0.14	<0.1	N/A	N/A	500 ^h	Mercury	1.7	2.5	23	610	2 ^r
TPH (C10-20)	6,900	1,800	N/A	N/A	1,000 ^h	Molybdenum	140	<1	390	10,000	390 ^s
TPH (C20-30)	29,000	16,000	N/A	N/A	10,000 ^h	Nickel	72	16	150	41,000	100 ^t
Antimony	360	<2	31	820	6 ⁱ	Vanadium	50	50	550	14,000	550 ^u
Arsenic	26	7.9	0.39	2.7	50 ^j	Zinc	1,200	73	23,000	100,000	5,000 ^v
Barium	2,700	170	5,400	100,000	1,000 ^k						

N/T - Not tested

N/A - Not applicable

- Soil screening levels based on a groundwater depth of 40 feet and sand, silt and clay soil matrix with a distance of 15 feet above groundwater.
- Soil screening levels based on a groundwater depth of 40 feet and sand, silt and clay soil matrix with a distance of 15 feet above groundwater.
- Soil screening levels based on a groundwater depth of 40 feet and sand, silt and clay soil matrix with a distance of 10 feet above groundwater.
- Soil screening levels based on a groundwater depth of 40 feet and sand, silt and clay soil matrix with a distance of 0 feet above groundwater.
- Soil screening levels based on a groundwater depth of 40 feet for C23 - C32.
- Soil screening levels based on a groundwater depth of 40 feet and sand soil matrix with a distance of 20 feet above groundwater.
- Soil screening levels based on a groundwater depth of 40 feet and sand soil matrix with a distance of 20 feet above groundwater.
- Cleanup level determination for notes i to n, p to r, t, and v were based on the Regional Board's "Designated Level Methodology", dated October 1986 and updated June 1989. The cleanup level is based on the natural attenuation factor of 100 used for silt, sand and clay with shallow groundwater depth (40 bgs) and a leachability factor of 10 multiplied by the maximum contaminant level of Antimony in groundwater of 0.006 mg/L.

- j. The cleanup level is based on the natural attenuation factor of 100 and a leachability factor of 10 multiplied by the maximum contaminant level of Arsenic in groundwater of 0.05 mg/L.
- k. The cleanup level is based on the natural attenuation factor of 100 and a leachability factor of 10 multiplied by the maximum contaminant level of Barium in groundwater of 1 mg/L.
- l. The cleanup level is based on the natural attenuation factor of 100 and a leachability factor of 10 multiplied by the maximum contaminant level of Beryllium in groundwater of 0.004 mg/L.
- m. The cleanup level is based on the natural attenuation factor of 100 and a leachability factor of 10 multiplied by the maximum contaminant level of Cadmium in groundwater of 0.005 mg/L.
- n. The cleanup level is based on the natural attenuation factor of 100 and a leachability factor of 10 multiplied by the maximum contaminant level of Chromium in groundwater of 0.05 mg/L.
- o. The cleanup level is based on the US EPA PRG Residential limit of 4,700 mg/Kg.
- p. The cleanup level is based on the natural attenuation factor of 100 and a leachability factor of 10 multiplied by the maximum contaminant level of Copper in groundwater of 1.3 mg/L.
- q. The cleanup level is based on the natural attenuation factor of 100 and a leachability factor of 10 multiplied by the maximum contaminant level of Lead in groundwater of 0.015 mg/L.
- r. The cleanup level is based on the natural attenuation factor of 100 and a leachability factor of 10 multiplied by the maximum contaminant level of Mercury in groundwater of 0.002 mg/L.
- s. The cleanup level is based on the US EPA PRG Residential limit of 390 mg/Kg.
- t. The cleanup level is based on the natural attenuation factor of 100 and a leachability factor of 10 multiplied by the maximum contaminant level of Nickel in groundwater of 0.1 mg/L.
- u. The cleanup level is based on the US EPA PRG Residential limit of 550 mg/Kg.
- v. The cleanup level is based on the natural attenuation factor of 100 and a leachability factor of 10 multiplied by the secondary maximum contaminant level of Zinc in groundwater of 5 mg/L.

IV. MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS IN GROUNDWATER

Contaminant	Groundwater (µg/L)		Maximum Contaminant Level (µg/L)	Contaminant	Groundwater (µg/L)		Maximum Contaminant Level (µg/L)
	Earliest (98 to 01)	Latest (2001)			Earliest (98 to 01)	Latest (2001)	
Benzene	77	<125	1	PCB	35,000	31,000	5
Toluene	140	<125	150	MEK	8.4	<500	1,900 ^a
Xylenes	1.6	<100	1,750	Acetone	490	<250	610 ^a
1,1-DCA	240	<125	5	Arsenic	320	320	50
1,1-DCE	220	<125	6	Barium	320	320	1000
1,2-DCA	65	<125	0.5	Chromium	<10	<10	50
c-1,2-DCE	450	350	6	Chromium VI	<10	<10	50
t-1,2-DCE	45	<125	10	Molybdenum	1,100	950	180 ^a
PCB	190	150	5	Zinc	25	24	5000 ^b

a - US EPA Region IX PRGs for Tap Water

b - Secondary MCL

V. SOIL REMEDIATION

Method: Excavation, Soil Vapor Extraction and Reaming Out of Residual Contamination	Duration of remediation: Five Years
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VI. GROUNDWATER REMEDIATION

Method: None	Duration of remediation: N/A
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VII. FREE PRODUCT:

Was free product encountered? No	Has free product been totally recovered? N/A
When was free product recovery project completed? N/A	

VIII. RECOMMENDED ACTION:

Soil Closure only: Yes	Case Closure: No	Solvent Case? Yes
Additional Action Required (i.e.: additional site assessment, remediation, monitoring): Groundwater Monitoring, Investigation and Remediation		

IX. COMMENTS AND JUSTIFICATION FOR RECOMMENDED ACTION:

Jervis B. Webb properties are located at 5030 Firestone Boulevard and 9301 Rayo Avenue in the City of South Gate, California. The Webb-Firestone property (the site) occupies about 1.4 acres. This site is bounded on the north by Firestone Boulevard and on the south by Reliable Steel, Incorporated. Piazza Trucking (formerly Laidlaw) lie immediately east of the Webb site (See Figure 1). To the west is a 50-foot wide Union Pacific Railroad easement. The Webb-Firestone property includes a 20,000 square foot steel-framed building with corrugated steel siding.

The building is surrounded by asphalt and concrete paving except for a planter on the north side of the building. A five-foot wide rail spur enters the subject property from the northwest and extends across the west side to a 10,000 square foot, steel-framed open bay on the Reliable Steel property to the south. Along the entire western portion of the property is a 35-foot wide Los Angeles County Flood Control easement that contains a large underground storm drain. Another storm drain runs along the north side of the property along Firestone Boulevard. A sanitary sewer pipeline extends across the eastern side of the Webb-Firestone property to another sewer line in Rayo Avenue (south of the Reliable Steel property).

Webb of California manufactured conveyor belt systems at the Rayo property (now the Reliable Steel property) from the middle 1950s to early 1996. The Firestone property was purchased by Webb of California in 1975 from Spear Industries. Blake Rivet Company (Blake), an aircraft rivet manufacturer, which had been leasing the property prior to Webb's purchase, continued to lease the property until approximately 1981. Blake used an above ground anodizer as part of its rivet manufacturing operation. Wastewater from the anodizer was collected in floor trenches where it was directed to a three-staged clarifier made of concrete. The clarifier was located just to the south of the southern wall of the Firestone property building (see Figure 1) until it was removed in November 1996. The clarifier reportedly discharged into the local sewer system. After Blake's departure, Webb of California used the Firestone property primarily for storage of metal stock that was used at the adjacent Webb Rayo conveyor facility until it was purchased by Reliable Steel in 1997.

On October 18, 1996, Jervis Webb completed underground storage tank activities as well as general site cleanup work. The Los Angeles County Department of Public Works issued a certification for tank closure on December 17, 1996. The tanks were described as underground sumps. The concrete bottom of Tank 1 was broken and soil beneath the sump was sampled. Soil analysis did not detect any petroleum hydrocarbons, VOCs or elevated metals. Tank 2 consisted of a three foot diameter open-bottomed steel pipe extending four feet below the floor level, with a man-hole type cover set in the concrete floor of the building. A layer of paint, approximately one to two inches thick was observed on the gravelly fill soil at the base of the structure. Soil sample P-1-2 from the soil at the base of the structure was taken approximately two feet below the paint layer and analyzed for VOCs, petroleum hydrocarbons and metals. The results of the soil sample contained elevated metal for arsenic, cadmium, chromium and lead. Further excavation to a depth of approximately 10 feet below floor level was conducted to further delineate the extent of the contamination. Additional four soil samples from the excavation did not detect elevated metals, total petroleum hydrocarbons or VOCs to a maximum depth of 10 feet bgs. Approximately 35 cubic yards of soil was excavated for the delineation of contamination of Tank 2. The gravelly fill material was observed to continue to the full depth of the excavation, fifteen feet below floor level. The excavations were backfilled with import fill and the excavated soil removed and disposed off-site. On November 18, 1996, Jervis Webb removed oil-stained soil from a section of the unlined utility trench near the vicinity of Tank 2 by the building footing. One cubic yard of soil, approximately one-foot thick extending approximately 15 feet, was removed. Elevated petroleum hydrocarbons were detected in addition to VOCs 1,1-DCA, 1,1,1-TCA, benzene and toluene. Confirmation samples contained no VOCs and petroleum hydrocarbons of middle to heavy distillates in one confirmation sample of 1,800 mg/Kg in the C10-C20 and 16,000 mg/Kg in the C20-C30 hydrocarbon range. After tank closure activities at the site, Jervis Webb sold the southern portion of the site to Reliable Steel and retained the northern portion of the property for further environmental evaluation.

On October 28, 1997, Jervis Webb completed fourteen soil borings at northern portion of the site. Soil borings were sampled to a maximum depth of ten feet below ground surface (bgs) inside and outside the building and to a maximum depth of 20 feet bgs in the vicinity of the clarifier. Soil samples were analyzed for pH, petroleum hydrocarbons, metals and VOCs. Hexavalent chromium was detected in a boring at approximately 10.5 feet bgs with a concentration of 0.88 mg/Kg. No petroleum hydrocarbons were detected. Maximum concentration of VOCs included trichloroethylene of 270 mg/Kg and 140 mg/Kg perchloroethylene beneath the clarifier. On December 1, 1997, a soil gas survey was conducted at the site to identify potential areas of VOC contamination. The data indicated that the primary contaminants were TCE and PCE with maximum concentration of 25 µg/L of TCE and 28 µg/L of PCE. On December 2, 1997, five deep soil borings were completed at the site to determine the vertical extent of VOCs in soil beneath the clarifier and anodizing areas. Soil borings were completed to a maximum depth ranging between 46.5 feet to 62.5 feet bgs. Groundwater was encountered at approximately 57 feet bgs. Elevated concentration of TCE and PCE were detected in the soil samples.

On February 24 and 25, 1998, three groundwater wells were installed at the site and screened from 40 feet to 70 feet bgs. The greatest depth of investigation was 73 feet bgs. The depth to groundwater ranged for approximately 43.5 to 44.8 feet bgs. Maximum concentration of TCE from groundwater monitoring was 25,000 µg/L. PCE, cis and trans 1,2-DCE, 1,1-DCE, 1,1-DCA and toluene were detected. A CPT investigation of the groundwater was conducted on October 1, 1999 at nine locations to further characterize the extent of groundwater impact. Two new groundwater monitoring wells were installed. A maximum concentration of 35,000 µg/L of TCE was detected in groundwater. Other VOCs detected were PCE, cis and trans 1,2-DCE, 1,1-DCA, 1,2-DCA and 1,1-DCE, acetone, benzene, xylenes, toluene and MEK.

On June 1, 1999, the clarifier at the site was excavated, removed and backfilled with 47 cubic yard of clean fill material. Eight vapor wells were installed at the site on June 23, 1999. The monitoring wells and probes were designed and constructed such that they could be converted for use as vapor extraction wells. Four soil vapor extraction (SVE) wells and four vapor monitoring probes were installed. Three of the monitoring probes were later converted to SVE wells by connecting to the SVE vacuum manifold. A total of four shallow SVE wells are screened from 19 to 25 feet, while three deep SVE wells are screened from 30 to 40 feet. The SVE system started operation on March 16, 2000. The system has operated nearly continuously for the past 15 months, except for down periods. Approximately 155 pounds of VOCs had been removed from the soil as of May 2001.

On September 13, 2001, five soil confirmation soil borings were drilled. The soil samples were analyzed for VOCs and metals. Two confirmation borings CB-3 and CB-4 contained elevated TCE concentrations of 290 and 630 µg/Kg, respectively. On December 14, 2001, residual soil contamination to include hexavalent chromium was drilled-out at the site. The borings were drilled using a six-inch diameter auger and subsequently reamed out by a twelve-inch auger. A total of three drill-outs were completed to remove approximately 3 cubic yards of soil. Confirmation soil samples were collected at the bottom of each borehole.

Residual contaminant concentration of petroleum hydrocarbons, metals and VOCs are slightly above acceptable levels. Boring CB-1 contains 35 µg/Kg of TCE at a depth of 20 feet bgs with a cleanup level of 34 µg/Kg, 67 µg/Kg of TCE at 25 feet bgs with a cleanup level of 45 µg/Kg.

Boring CB-3 contains 24 µg/Kg of TCE at a depth of 36 feet with a cleanup level of 6 µg/Kg. The residual contamination is localized, of limited mass and the planned use of the site as a paved development will minimize future groundwater impacts.

Petroleum hydrocarbons are slightly above acceptable limits. Sample B-1-2 contained 1,800 mg/Kg of C-10 to C-20 range hydrocarbon with a cleanup level of 1,000 mg/Kg and 16,000 mg/Kg of C20 to C-30 range hydrocarbon with a cleanup level of 10,000 mg/Kg. The elevated residual contaminants will attenuate due to the biodegradable nature of petroleum hydrocarbons.

The elevated Antimony concentration of 360 mg/Kg was taken from sample DS-2. DS-2 was primarily dry paint scrapings for waste characterization. The rest of the samples were non-detect for Antimony. Arsenic concentrations at the site vary from non-detect to 7.6 mg/Kg. The elevated arsenic concentration of 26 mg/Kg was taken from sample P-1-2 approximately two feet below the paint layer at the base of the structure Tank 2. The area around and below P-1-2 was excavated. No other elevated concentrations of arsenic were detected at the site. The distribution of arsenic concentration reflects background concentrations. The elevated Barium concentration of 2,700 mg/Kg was taken from sample DS-2. The next highest concentration of Barium was 170 mg/Kg in boring CB-1 at 25 feet bgs. Cadmium concentration in sample P-1-2 was 8.3 mg/Kg. The next highest concentration of cadmium detected was detected in DS-2 of 2.3 mg/Kg and 0.6 mg/Kg in boring CB-1 at 25 feet bgs. The elevated Chromium concentration of 7,300 mg/Kg was taken from sample DS-2. The next highest chromium concentration was detected in P-1-2 of 350 mg/Kg, SP-1-E and SP-1-W of 97 mg/Kg, SP-2-N and SP-2-S of 85 mg/Kg and boring B6 at six feet bgs of 74 mg/Kg. The elevated concentrations of chromium in the stockpile samples SP-1-E, SP-1-W, SP-2-N and SP-2-S are not representative of the rest of concentrations detected at the site, with the exception of 74 mg/Kg at B6 at five feet. All the other detected chromium concentrations are below the cleanup level of 50 mg/Kg. The elevated lead concentration of 31,000 mg/Kg was taken from sample DS-2. The next highest sample was obtained from P-1-2 of 1,600 mg/Kg, SP-2-N and SP-2-S of 25 mg/Kg and SP-1 of 17 mg/Kg. The elevated concentrations of lead in the stockpile samples SP-2-N and SP-2-S, and SP-1 are not representative of the rest of concentrations detected at the site. All other lead levels are below the cleanup level of 15 mg/Kg for lead. The elevated mercury concentration was encountered in boring CB-1 at 30 feet bgs with a cleanup level of 2 mg/Kg. All the other detected Mercury concentrations are below the cleanup level of 2 mg/Kg. Boring CB-1A contains 0.24 mg/Kg of hexavalent chromium with a cleanup level of 0.2 mg/Kg. The residual contamination mentioned above is localized, of limited mass and the planned use of the site as a paved development will minimize future groundwater impacts.

All other soil analysis at the site were non-detect or below acceptable levels based on the U.S. EPA PRG levels for human health protection and Regional Board's Interim Site Assessment & Cleanup Guidebook (site specific cleanup goals for groundwater protection). Based upon the information submitted, the site does not have a soil source for the VOCs detected in the groundwater at this time. The metal cleanup level determination was based on the Regional Board's "Designated Level Methodology", date October 1986 and updated June 1989. The cleanup level is based on the natural attenuation factor of 10 used for silt, sand, and clay with shallow groundwater depth and a leachability factor of 100 multiplied by the maximum contaminant level (or secondary maximum contaminant level) of each metal. Based on the submitted data, staff submits Jervis Webb's recommendation of no further action for soil at the subject site, with groundwater monitoring, investigation and remediation is appropriate at this time.

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